

SEQUENCE LISTING

<110> Tanzi, Rudolph E.
Kovacs, Dora
Saunders, Aleister J.

<120> Alpha-2-Macroglobulin Therapies and Drug Screening Methods for
Alzheimer's Disease

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gct ctc cat gct ctg tcc aaa tat gga gcc gcc aca ttt acc agg act 144
Ala Leu His Ala Leu Ser Lys Tyr Gly Ala Ala Thr Phe Thr Arg Thr
35 40 45

ggg aag gct gca cag gtg act atc cag tct tca ggg aca ttt tcc agc 192
Gly Lys Ala Ala Gln Val Thr Ile Gln Ser Ser Gly Thr Phe Ser Ser
50 55 60

aaa ttc caa gtg gac aac aac aat cgc ctg tta ctg cag cag gtc tca 240
Lys Phe Gln Val Asp Asn Asn Asn Arg Leu Leu Gln Gln Val Ser
65 70 75 80

ttg cca gag ctg cct ggg gaa tac agc atg aaa gtg aca gga gaa gga 288
Leu Pro Glu Leu Pro Gly Glu Tyr Ser Met Lys Val Thr Gly Glu Gly

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85	90	95	
tgt gtc tac ctc cag acc tcc ttg aaa tac aat att ctc cca gaa aag			336
Cys Val Tyr Leu Gln Thr Ser Leu Lys Tyr Asn Ile Leu Pro Glu Lys			
100	105	110	
gaa gag ttc ccc ttt gct tta gga gtg cag act ctg cct caa act tgt			384
Glu Glu Phe Pro Phe Ala Leu Gly Val Gln Thr Leu Pro Gln Thr Cys			
115	120	125	
gat gaa ccc aaa gcc cac acc agc ttc caa atc tcc cta agt gtc agt			432
Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile Ser Leu Ser Val Ser			
130	135	140	
tac aca ggg agc cgc tct gcc tcc aac atg gcg atc gtt gat gtg aag			480
Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala Ile Val Asp Val Lys			
145	150	155	160
atg gtc tct ggc ttc att ccc ctg aag cca aca gtg aaa atg ctt gaa			528
Met Val Ser Gly Phe Ile Pro Leu Lys Pro Thr Val Lys Met Leu Glu			
165	170	175	
aga tct aac cat gtg agc cgg aca gaa gtc agc agc aac cat gtc ttg			576
Arg Ser Asn His Val Ser Arg Thr Glu Val Ser Ser Asn His Val Leu			
180	185	190	
att tac ctt gat aag gtg tca aat cag aca ctg agc ttg ttc ttc acg			624
Ile Tyr Leu Asp Lys Val Ser Asn Gln Thr Leu Ser Leu Phe Phe Thr			
195	200	205	
gtt ctg caa gat gtc cca gta aga gat ctc aaa cca gcc ata gtg aaa			672
Val Leu Gln Asp Val Pro Val Arg Asp Leu Lys Pro Ala Ile Val Lys			
210	215	220	
gtc tat gat tac tac gag acg gat gag ttt gca atc gct gag tac aat			720
Val Tyr Asp Tyr Tyr Glu Thr Asp Glu Phe Ala Ile Ala Glu Tyr Asn			
225	230	235	240
gct cct tgc agc aaa gat ctt gga aat gct			750
Ala Pro Cys Ser Lys Asp Leu Gly Asn Ala			
245	250		

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<211> 250

<212> PRT

<213> Homo sapiens

<400> 4

Ser Glu Asp Leu Thr Ser Ala Thr Asn Ile Val Lys Trp Ile Thr Lys
1 5 10 15

Gln Gln Asn Ala Gln Gly Gly Phe Ser Ser Thr Gln Asp Thr Val Val
20 25 30

Ala Leu His Ala Leu Ser Lys Tyr Gly Ala Ala Thr Phe Thr Arg Thr
35 40 45

Gly Lys Ala Ala Gln Val Thr Ile Gln Ser Ser Gly Thr Phe Ser Ser
50 55 60

Lys Phe Gln Val Asp Asn Asn Asn Arg Leu Leu Leu Gln Gln Val Ser
65 70 75 80

Leu Pro Glu Leu Pro Gly Glu Tyr Ser Met Lys Val Thr Gly Glu Gly
85 90 95

Cys Val Tyr Leu Gln Thr Ser Leu Lys Tyr Asn Ile Leu Pro Glu Lys
100 105 110

Glu Glu Phe Pro Phe Ala Leu Gly Val Gln Thr Leu Pro Gln Thr Cys
115 120 125

Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile Ser Leu Ser Val Ser
130 135 140

Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala Ile Val Asp Val Lys
145 150 155 160

Met Val Ser Gly Phe Ile Pro Leu Lys Pro Thr Val Lys Met Leu Glu
165 170 175

Arg Ser Asn His Val Ser Arg Thr Glu Val Ser Ser Asn His Val Leu
180 185 190

Ile Tyr Leu Asp Lys Val Ser Asn Gln Thr Leu Ser Leu Phe Phe Thr
195 200 205

Val Leu Gln Asp Val Pro Val Arg Asp Leu Lys Pro Ala Ile Val Lys
210 215 220

Val Tyr Asp Tyr Tyr Glu Thr Asp Glu Phe Ala Ile Ala Glu Tyr Asn
225 230 235 240

Ala Pro Cys Ser Lys Asp Leu Gly Asn Ala
245 250

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<211> 333

<212> DNA

<213> Homo sapiens

<220>

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<223> Aβ Binding Domain

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1 5 10 15

cag cag aat gcc cag ggc ggt ttc tcc tcc acc cag gac aca gtg gtg 96
Gln Gln Asn Ala Gln Gly Gly Phe Ser Ser Thr Gln Asp Thr Val Val
20 25 30

gct ctc cat gct ctg tcc aaa tat gga gcc gcc aca ttt acc agg act 144
Ala Leu His Ala Leu Ser Lys Tyr Gly Ala Ala Thr Phe Thr Arg Thr
35 40 45

ggg aag gct gca cag gtg act atc cag tct tca ggg aca ttt tcc agc 192
Gly Lys Ala Ala Gln Val Thr Ile Gln Ser Ser Gly Thr Phe Ser Ser

60

tgt gtc tac ctc cag acc tcc ttg aaa tac aat att ctc cca gaa 333
Cys Val Tyr Leu Gln Thr Ser Leu Lys Tyr Asn Ile Leu Pro Glu
100 105 110

<213> Homo sapiens

Ser Glu Asp Leu Thr Ser Ala Thr Asn Ile Val Lys Trp Ile Thr Lys
1 5 10 15

Ala Leu His Ala Leu Ser Lys Tyr Gly Ala Ala Thr Phe Thr Arg Thr
35 40 45

Lys Phe Gln Val Asp Asn Asn Asn Arg Leu Leu Leu Gln Gln Val Ser
65 70 75 80

Cys Val Tyr Leu Gln Thr Ser Leu Lys Tyr Asn Ile Leu Pro Glu
100 105 110

<210> 7
<211> 417
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(417)
<223> LRP Binding Domain

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aag gaa gag ttc ccc ttt gct tta gga gtg cag act ctg cct caa act 48
Lys Glu Glu Phe Pro Phe Ala Leu Gly Val Gln Thr Leu Pro Gln Thr
1 5 10 15
tgt gat gaa ccc aaa gcc cac acc agc ttc caa atc tcc cta agt gtc 96
Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile Ser Leu Ser Val
20 25 30
agt tac aca ggg agc cgc tct gcc tcc aac atg gcg atc gtt gat gtg 144
Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala Ile Val Asp Val
35 40 45
aag atg gtc tct ggc ttc att ccc ctg aag cca aca gtg aaa atg ctt 192
Lys Met Val Ser Gly Phe Ile Pro Leu Lys Pro Thr Val Lys Met Leu
50 55 60
gaa aga tct aac cat gtg agc cgg aca gaa gtc agc agc aac cat gtc 240
Glu Arg Ser Asn His Val Ser Arg Thr Glu Val Ser Ser Asn His Val
65 70 75 80
ttg att tac ctt gat aag gtg tca aat cag aca ctg agc ttg ttc ttc 288
Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln Thr Leu Ser Leu Phe Phe
85 90 95
acg gtt ctg caa gat gtc cca gta aga gat ctc aaa cca gcc ata gtg 336
Thr Val Leu Gln Asp Val Pro Val Arg Asp Leu Lys Pro Ala Ile Val
100 105 110

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aat gct cct tgc agc aaa gat ctt gga aat gct      417
Asn Ala Pro Cys Ser Lys Asp Leu Gly Asn Ala
      130      135
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<213> Homo sapiens

Asn Ala Pro Cys Ser Lys Asp Leu Gly Asn Ala
130 135

<210> 9
<211> 81
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(81)
<223> Consensus LRP Binding Domain

<400> 9
ttc att ccc ctg aag cca aca gtg aaa atg ctt gaa aga tct aac cat 48
Phe Ile Pro Leu Lys Pro Thr Val Lys Met Leu Glu Arg Ser Asn His
1 5 10 15

gtg agc cgg aca gaa gtc agc agc aac cat gtc 81
Val Ser Arg Thr Glu Val Ser Ser Asn His Val
20 25

<210> 10
<211> 27
<212> PRT
<213> Homo sapiens

<400> 10
Phe Ile Pro Leu Lys Pro Thr Val Lys Met Leu Glu Arg Ser Asn His
1 5 10 15

Val Ser Arg Thr Glu Val Ser Ser Asn His Val
20 25

<210> 11
<211> 33
<212> DNA
<213> Homo sapiens

<220>

<221> CDS
 <222> (1)..(33)
 <223> Aβ Fibril Inhibitor

<400> 11
 cgc gat ctg cca ttc ttc cca gtc cca att gat 33
 Arg Asp Leu Pro Phe Phe Pro Val Pro Ile Asp
 1 5 10

<210> 12
 <211> 11
 <212> PRT
 <213> Homo sapiens

<400> 12
 Arg Asp Leu Pro Phe Phe Pro Val Pro Ile Asp
 1 5 10

<210> 13
 <211> 114
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)..(114)
 <223> Aβ Fibril Inhibitor

<400> 13
 cgc gat ctg cca ttc ttc cca gtc cca att gat ttc att ccc ctg aag 48
 Arg Asp Leu Pro Phe Phe Pro Val Pro Ile Asp Phe Ile Pro Leu Lys
 1 5 10 15

cca aca gtg aaa atg ctt gaa aga tct aac cat gtg agc cgg aca gaa 96
 Pro Thr Val Lys Met Leu Glu Arg Ser Asn His Val Ser Arg Thr Glu
 20 25 30

gtc agc agc aac cat gtc 114
 Val Ser Ser Asn His Val

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35

<210> 14
<211> 38
<212> PRT
<213> Homo sapiens

<400> 14
Arg Asp Leu Pro Phe Phe Pro Val Pro Ile Asp Phe Ile Pro Leu Lys
1 5 10 15
Pro Thr Val Lys Met Leu Glu Arg Ser Asn His Val Ser Arg Thr Glu
20 25 30
Val Ser Ser Asn His Val
35

<210> 15
<211> 27
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(27)

<400> 15
cgc gat ctg cca ttc ttc cca gtc gat 27
Arg Asp Leu Pro Phe Phe Pro Val Asp
1 5

<210> 16
<211> 9
<212> PRT
<213> Homo sapiens

<400> 16
Arg Asp Leu Pro Phe Phe Pro Val Asp

1

5

<210> 17

<211> 21

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(21)

<400> 17

ctg cca ttc ttc cca gtc gat

21

Leu Pro Phe Phe Pro Val Asp

1

5

<210> 18

<211> 7

<212> PRT

<213> Homo sapiens

<400> 18

Leu Pro Phe Phe Pro Val Asp

1

5

<210> 19

<211> 18

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(18)

<400> 19

ctg cca ttc ttc gtc gat

18

Leu Pro Phe Phe Val Asp

1

5

<210> 20
<211> 6
<212> PRT
<213> Homo sapiens

<400> 20
Leu Pro Phe Phe Val Asp
1 5

<210> 21
<211> 15
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(15)

<400> 21
ctg cca ttc ttc gat
Leu Pro Phe Phe Asp
1 5

15

<210> 22
<211> 5
<212> PRT
<213> Homo sapiens

<400> 22
Leu Pro Phe Phe Asp
1 5

<210> 23
<211> 12
<212> DNA
<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(12)

<400> 23

ctg cca ttc ttc

Leu Pro Phe Phe

1

12

<210> 24

<211> 4

<212> PRT

<213> Homo sapiens

<400> 24

Leu Pro Phe Phe

1

<210> 25

<211> 9

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(9)

<400> 25

cca ttc ttc

Pro Phe Phe

1

9

<210> 26

<211> 3

<212> PRT

<213> Homo sapiens

<400> 26

Pro Phe Phe

1

<210> 27

<211> 50

<212> DNA

<213> Homo sapiens

<220>

<223> Noncoding-antisense DNA

<400> 27

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